GEOLOGIC MAP AND SECTIONS OF PARTS OF THE BELVIDERE AND WASHINGTON QUADRANGLES, **NEW JERSEY**

Robert Louis Kastelic, Jr. 1980



Swamp deposits overlying Lower Paleozoic sedimentary rocks.



Glacial deposits overlying Paleozoic sedimentary rocks.

Swamp Deposits clay, silt, fine gravel, and partly decomposed plant material

ag

Undifferentiated glacial deposits

sand, gravel, till, and ground moraine of Wisconsin age

Martinsburg Formation

Omb, Bushkill Member. Thin bedded, dark-gray, medium-gray to yellowish-brown weathering claystone slate

Middle Ordovic

Epler Formation

Light to medium-gray limestone and light to dark-medium-gray dolomite, containing lenses of orthoguartzite

Allentown Dolomite

very fine to medium-grained, light-gray dolomite, containing argillaceous layers. Oolites are common.

Hardyston Quartzite

Gray, brown-weathering quartzite, often arkosic.

Undifferentiated Lower Paleozoic rocks

unconformity

IGNEOUS ROCKS



ga, microperthite alaskite. Medium to coarse grained, light gray gneissoid granite and granite gneiss, composed mostly of microperthite, quartz, and oligoclase. Contains local unmappable bodies of amphibolite and potassium feldspar gneiss.

gma, microantiperthite alaskite. Differs from ga in that the feldspar is dominantly antiperthitic. Lenticular quartz is commonly present. The rock weathers chalk white.



Hornblende granite and associated biotite granite

gh, hornblende granite. Medium to coarse grained, pink to light gray gneissoid granite and granite gneiss, composed mainly of microperthite, quartz, oligoclase, and hornblende. Locally contains unmappable bodies of microperthite alaskite, amphibolite and potassium feldspar gneiss.

gb, biotite granite. Differs from gh in that biotite is the principal mafic constituent. Unit is variable in composition. The rock has a light greenish color, and weathers to a light brown color.

Explanation

Paleozoic rocks were not studied and specific units are shown in only a few places.



Hornblende syenite

Dark gray to greenish gray, medium to coarse grained rock, consisting mainly of microperthite, hornblende, with minor quartz.

METASEDIMENTARY AND (OR) METAVOLCANIC ROCKS

Age relations of the following rocks are unknown

Amphibolite

Fine-to medium-grained dark greenishgray to black amphibolite with variable amounts of hornblende, biotite, and pyroxene.

Quartz-potassium feldspar gneiss

Fine-to medium-grained pink to pinkishgray to gray gneiss with poor to fair foliation. The unit is composed largely of quartz and microcline with minor amounts of biotite, magnetite, and garnet. Local layers and lenses of feldspathic quartzite and oligoclasequartz-gneiss are found.



Quartz-epidote gneiss

Fine-to medium-grained gneiss with alternating green and gray layers, containing quartz, epidote, green pyroxene with local concentrations of potassium feldspar and magnetite. Lenses of green pyroxenite are found locally.



Marble

Medium-to coarse-grained gray to bluish-gray rock containing isolated bodies of amphibolite, and lenses and layers of magnetite. Calcite is the dominant mineral, and accessory finely disseminated graphite is found. Layers of oligoclase-quartz gneiss are found locally.



Mixed rock with lenses and veins of microperthite alaskite in amphibolite.



Oligoclase-quartz gneiss and related albite oligoclase granite

gno, oligoclase-quartz gneiss. Fine-to medium-coarse-grained, light greenish-gray to grayish-green granoblastic gneiss composed mainly of oligoclase and quartz with minor biotite, magnetite, pyroxene, and, locally garnet. Unmappable layers of amphibolite, albite-oligoclase granite, and albite pegmatite are locally found.

gao, albite-oligoclase granite. Medium-tocoarse grained, light greenish gneissoid granite composed dominantly of albiteoligoclase and quartz.

pta, albite pegmatite. Coarse grained, light-greenish-gray rock composed largely of albite and quartz. Locally, large crystals of pyroxene, hornblende, and magnetite are found.



Pseudodiorite

Medium-to-coarse-grained dark-gray-todark-greeinish-gray rock composed of hornblende, plagioclase, and augitic pyroxene. It is probably coarsened amphibolite.



Undifferentiated Precambrian rocks

Amphibolites, marbles, gneisses, and granites of Grenville age.

U.S. Geological Survey CPEN-FILE REPORT 80-789

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.

Contact

Dashed where approximately located

Thrust fault, showing dip

Dashed where approximately located. T, on upper plate.

Inclined

Overturned

Contact of Precambrian core with limbs of the Musconetcong nappe. Sawteeth on core side of contact. Where overturned, sawteeth in direction of dip; bar on core side of contact. Dashed where approximately located.

Antiform

Showing direction of plunge. Dashed where approximately located.

Overturned antiform

Showing trace of axial surface and direction of dip of limbs and plunge. Dashed where approximately located.

Overturned synform

Showing trace of axial surface and direction of dip of limbs and plunge. Dashed where approximately located.

PLANAR FEATURES

Inclined

Strike and dip of beds

Inclined

ECAMBRIAN

Vertical

Strike and dip of compositional

layering and crystallization foliation in Precambrian rocks.

> 70 Inclined

Strike and dip of cataclastic foliation in Precambrian rocks.

Inclined

Strike and dip of axial plane cleavage.

Inclined

Strike and dip of essentially parallel bedding and cleavage.

Magnetite deposit

Showing direction of dip.

LINEAR FEATURES (May be combined with any of the above features)

Bearing and plunge of mineral lineation in Precambrian rocks



Bearing and plunge of intersection of bedding and cleavage